

AMENDMENTS TO THE CLAIMS

This listing of the claims replaces all prior versions, and listing of the claims, in this application.

Listing of the Claims

1. (Canceled)
2. (Currently Amended) A control system, comprising:
a plurality of field devices,
at least one of the field devices providing a second control function within the control system, the second control function including controlling one or more devices,
a computing device providing a first control function within the control system, the first control function including controlling at least the field device that provides the second control function,
the computing device including a control subsystem comprising:
a bus,
a plurality of modules that are coupled to the bus and that each comprise a housing, and
at least a first module comprising a controller,
at least a second module including interface logic adapted for communication with interfacing one or more of the field devices,
at least a third module including interface logic adapted for communication with interfacing to the field device that provides the second control function.

3. (Currently Amended) A control system, comprising:
 - a computing device providing a first control function within the control system,
 - a plurality of field devices,
 - at least one of the field devices providing a second control function within the control system,
 - a control subsystem communicatively coupled to the computing device, the control subsystem comprising:
 - a bus,
 - a plurality of modules that are coupled to the bus and that each comprise a housing, and
 - at least a first module comprising a controller,
 - at least a second module including interface logic adapted for communication with interfacing one or more of the field devices,
 - at least a third module including interface logic adapted for communication with interfacing to- the field device that provides the second control function
 - wherein the computing device downloads programs and data to the control subsystem.
 4. (Currently Amended) A control system, comprising:
 - a computing device providing a first control function within the control system,
 - a plurality of field devices,
 - at least one of the field devices providing a second control function within the control system,

a control subsystem communicatively coupled to the computing device, the control subsystem comprising:

a bus,

a plurality of modules that are coupled to the bus and that each comprise a housing, and

at least a first module comprising a controller,

at least a second module including interface logic adapted for communication with interfacing one or more of the field devices,

at least a third module including interface logic adapted for communication with interfacing to the field device that provides the second control function

a support member that is adapted to mount to any of a wall and a DIN rail, at least one module being mechanically coupled to the support member,

wherein the computing device downloads programs and data to the control subsystem.

5. (Previously Presented) A control system according to claim 3, wherein at least one of the field devices comprises a sensor.

6. (Previously Presented) A control system according to claim 3, wherein the bus is a multidrop bus.

7. (Currently Amended) A control system, comprising

a network,

a first control device that is coupled to the network,

a second control device that is coupled to the network for communication with at least the first control device,

one or more field devices,

at least one of the field devices comprising a third control device,

the second control device comprising

a bus,

a control processor that is coupled to the bus,

one or more modules that are coupled to the bus for communication with at least the control processor,

at least one of the modules comprising a housing, and

at least one of the modules including interface logic being adapted to serve as an interface to at least one field device,

at least one other of the modules including interface logic adapted to serve serving as an interface to, and controlling, the field device that comprises the third control device,

the first control device being configured to control the second control device.

8. (Currently Amended) A control system, comprising

a network,

a first control device that is coupled to the network,

- a second control device that is coupled to the network for communication with at least the first control device,
- one or more field devices,
- at least one of the field devices comprising a third control device,
- the second control device comprising
- a bus,
- a control processor that is coupled to the bus,
- one or more modules that are coupled to the bus for communication with at least the control processor,
- at least one of the modules comprising a housing, and
- at least one of the modules including interface logic being adapted to serve as an interface to at least one field device,
- at least one other of the modules including interface logic adapted to serve serving as an interface to, and controlling, the field device that comprises the third control device,
- a support member that is adapted to mount to any of a wall and a DIN rail, at least one of the modules being mechanically coupled to the support member,
- the first control device being configured to control the second control device.
9. (Previously Presented) A control system according to claim 7, wherein at least one of the field devices comprises a sensor.

10. (Previously Presented) A control system according to claim 7, wherein the bus is a multidrop bus.
11. (Currently Amended) A control system, comprising
 - a first control device and a second control device,
 - the first control device comprising
 - a bus,
 - a plurality of modules that are coupled to the bus,
 - a first module comprising a control processor,
 - a second module ~~at least one of the modules other than the first module including interface logic adapted for communication with~~ adapted to provide an interface to a field device,
~~at least one of the modules other than the first module and the second module including interface logic adapted to serve~~ serving as an interface to a field device that comprises the second control device,
 - at least one of the modules comprising a housing,
 - a computing device that is coupled to the first control device via a network, the computing device being configured to download programs to the first control device.
12. (Previously Presented) A control system, comprising
 - a first control device and a second control device,
 - the first control device comprising

- a bus,
- a plurality of modules that are coupled to the bus,
- at least one of the modules comprising a control processor,
- at least one other of the modules adapted to provide an interface to a field device,
- at least one of the other modules serving as an interface to a field device that comprises the second control device,
- at least one of the other modules including interface logic that comprises a PCMCIA card,
- a computing device that is coupled to the first control device via a network, the computing device being configured to download programs to the first control device.
13. (Previously Presented) According to claim 12, wherein the interface logic further comprises
- an interface controller in communication with the PCMCIA card, and
- an external connector in communication with the PCMCIA card.
14. (Previously Presented) A control system according to claim 11, wherein the second control device executes programming for process control.
15. (Previously Presented) A control system, comprising
- a first control device and a second control device,
- the first control device comprising
- a bus,

a plurality of modules that are coupled to the bus,
at least one of the modules comprising a control processor,
at least one other of the modules adapted to provide an interface to a field device,
at least one of the other modules serving as an interface to a field device that comprises the second control device,
at least one of the other modules comprising a PCMCIA card that is adapted for communications with the respective field device of that module,
a computing device that is coupled to the first control device via a network, the computing device being configured to download programs to the first control device.

16. (Currently Amended) A control system, comprising

a first control device that is coupled to a workstation via a network, the first control device comprising
a bus,
a plurality of modules that are coupled to the bus,
a first module comprising a control processor,
a second module at least one of the modules other than the first module including interface logic adapted for communication with adapted to provide an interface to a field device,
at least one of the modules other than the first module and the second module including interface logic adapted to serve serving as an interface to a field device that comprises the second control device,

- at least one of the modules comprising a housing,
the workstation being configured to download programs to the first control device.
17. (Previously Presented) A control system, comprising
a first control device that is coupled to a workstation via a network, the first control device comprising
a bus,
a plurality of modules that are coupled to the bus,
at least one of the modules comprising a control processor,
at least one other of the modules adapted to provide an interface to a field device,
at least one of the other modules serving as an interface to a field device that comprises the second control device,
at least one of the other modules comprising interface logic that includes a PCMCIA card,
the workstation being configured to download programs to the first control device.
18. (Previously Presented) According to claim 17, wherein the interface logic further comprises
an interface controller in communication with the PCMCIA card, and
an external connector in communication with the PCMCIA card.
19. (Currently Amended) A control system, comprising

a first control device that is coupled to a workstation via a network, the first control device comprising

a bus,

a plurality of modules that are coupled to the bus,

at least one of the modules comprising a control processor and including interface logic adapted for communication with a field device,

at least one other of the modules including interface logic adapted for communication with adapted to provide an interface to a field device,

at least one of the other modules serving as an interface to a field device that comprises the second control device,

a support member that is adapted to mount to any of a wall and a DIN rail, at least one of the modules being mechanically coupled to the support member,

the workstation being configured to download programs to the first control device.

20. (Previously Presented) A control system, comprising

a first control device that is coupled to a workstation via a network, the first control device comprising

a bus,

a plurality of modules that are coupled to the bus,

at least one of the modules comprising a control processor,

at least one other of the modules adapted to provide an interface to a field device,

at least one of the other modules serving as an interface to a field device that comprises the second control device,

at least one of the other modules comprising a PCMCIA card that is adapted to serve as the interface to the respective field device of that module,

the workstation being configured to download programs to the first control device.

21. (Currently Amended) A control system, comprising

a computing device coupled to a network,

a first control device that is coupled to the computing device via the network, the first control device comprising

a bus,

a control processor that is coupled to the bus,

a plurality of modules that are coupled to the bus and that each include interface logic that are adapted to serve as an interface to a field device ~~interfaces to a field devices~~,

at least one of the modules comprising a housing,

at least one of the modules including serving as an interface to, and controlling, a device that includes a second control device,

wherein the computing device is configured to download programs to the first control device.

22. (Currently Amended) A control system according to claim 21, wherein ~~at least one of the modules other than the module interfacing the device that includes the second control device comprises interface logic; the interface logic included in one of the modules~~

converts signals transmitted to and/or received from the field device to which it interfaces in a manner that differs from that of the interface logic included in another of the modules with respect to the field device to which it interfaces.

23. (Previously Presented) A control system, comprising
 - a computing device coupled to a network,
 - a first control device that is coupled to the computing device via the network, the first control device comprising
 - a bus,
 - a control processor that is coupled to the bus,
 - a plurality of modules that are coupled to the bus and that are adapted to serve as interfaces to field devices,
 - at least one of the modules serving as an interface to, and controlling, a device that includes a second control device,
 - at least one of the other modules comprising interface logic that comprises a PCMCIA card,
 - wherein the computing device is configured to download programs to the first control device.
24. (Previously Presented) According to claim 23, wherein the interface logic further comprises
 - an interface controller in communication with the PCMCIA card, and
 - an external connector in communication with the PCMCIA card.

25. (Currently Amended) A control system, comprising
- a computing device coupled to a network,
- a first control device that is coupled to the computing device via the network, the first control device comprising
- a bus,
- a control processor that is coupled to the bus,
- a plurality of modules that are coupled to the bus and that are adapted to serve as interfaces to field devices, and that each include interface logic,
- at least one of the modules including interface logic adapted to serve serving as an interface to, and controlling, a device that includes a second control device,
- at least one of the other modules comprising a support member that is adapted to mount to a DIN rail,
- wherein the computing device is configured to download programs to the first control device.

26. (Previously Presented) A control system, comprising
- a computing device coupled to a network,
- a first control device that is coupled to the computing device via the network, the first control device comprising
- a bus,
- a control processor that is coupled to the bus,

a plurality of modules that are coupled to the bus and that are adapted to serve as interfaces to field devices,

at least one of the modules serving as an interface to, and controlling, a device that includes a second control device,

at least one of the other modules comprising a PCMCIA card that is adapted to serve as the interface to the respective field device of that module,

wherein the computing device is configured to download programs to the first control device.

27. (Currently Amended) A control system, comprising

a first control device coupled to a network,

a second control device that is coupled to the first control device via the network, the second control device including

a control processor,

a plurality of modules that are coupled to one another and to the control processor by a bus, the modules each having interface logic being adapted to serve as an interface interfaces to one or more field devices,

at least one of the modules comprising a housing,

at least one of the modules having interface logic being adapted to serve as an interface to a field device that comprises a third control device.

28. (Currently Amended) A control system according to claim 27, wherein at least one of the modules other than the module interfacing to the field device that comprises the third control device comprises interface logic, the interface logic included in one of the modules converts signals transmitted to and/or received from the field device to which it

interfaces in a manner that differs from that of the interface logic included in another of the modules with respect to the field device to which it interfaces.

29. (Previously Presented) A control system, comprising
 - a first control device coupled to a network,
 - a second control device that is coupled to the first control device via the network, the second control device including
 - a control processor,
 - a plurality of modules that are coupled to one another and to the control processor by a bus, the modules being adapted to serve as interfaces to field devices,
 - at least one of the modules being adapted to serve as an interface to a field device that comprises a third control device,
 - at least one of the other modules comprising interface logic that comprises a PCMCIA card.
30. (Previously Presented) According to claim 29, wherein the interface logic further comprises
 - an interface controller in communication with the PCMCIA card, and
 - an external connector in communication with the PCMCIA card.
31. (Currently Amended) A control system, comprising
 - a first control device coupled to a network,
 - a second control device that is coupled to the first control device via the network, the second control device including

a control processor,

a plurality of modules that are coupled to one another and to the control processor by a bus, the modules each including interface logic adapted for communication with one or more being adapted to serve as interfaces to field devices,

at least one of the modules including interface logic adapted for communication with being adapted to serve as an interface to a field device that comprises a third control device,

a support member that is adapted to mount to any of a wall and a DIN rail, wherein at least one of the modules is coupled to the support.

32. (Previously Presented) A control system according to claim 31, wherein the support member is adapted to mount to a DIN rail.
33. (Previously Presented) A control system according to claim 27, wherein the second control device is adapted to control the third control device.
34. (Previously Presented) A control system according to claim 27, wherein the second control device can be expanded to include further modules.
35. (Previously Presented) A control system, comprising

a first control device coupled to a network,

a second control device that is coupled to the first control device via the network, the second control device including

a control processor,

a plurality of modules that are coupled to one another and to the control processor by a bus, the modules being adapted to serve as interfaces to field devices,

at least one of the modules being adapted to serve as an interface to a field device that comprises a third control device,

at least one of the other modules comprising a PCMCIA card that is adapted to serve as the interface to the respective field device of that module.

36. (Previously Presented) A control system according to claim 2, wherein the housing is a field mountable housing.
37. (Previously Presented) A control system according to claim 3, wherein the housing is a field mountable housing.
38. (Previously Presented) A control system according to claim 7, wherein the housing is a field mountable housing.
39. (Previously Presented) A control system according to claim 11, wherein the housing is a field mountable housing.
40. (Previously Presented) A control system according to claim 16, wherein the housing is a field mountable housing.
41. (Previously Presented) A control system according to claim 21, wherein the housing is a field mountable housing.
42. (Previously Presented) A control system according to claim 27, wherein the housing is a field mountable housing.
43. (New) A control system according to claim 2, wherein the interface logic included in the second module converts signals transmitted to and/or received from the field device to which it interfaces in a manner that differs from that of the interface logic included in the third module with respect to the field device to which it interfaces.
44. (New) A control system according to claim 3, wherein the interface logic included in the second module converts signals transmitted to and/or received from the field device to

which it interfaces in a manner that differs from that of the interface logic included in the third module with respect to the field device to which it interfaces.

45. (New) A control system according to claim 4, wherein the interface logic included in the second module converts signals transmitted to and/or received from the field device to which it interfaces in a manner that differs from that of the interface logic included in the third module with respect to the field device to which it interfaces.
46. (New) A control system according to claim 7, wherein the interface logic included in the at least one module converts signals transmitted to and/or received from the field device to which it interfaces in a manner that differs from that of the interface logic included in the at least one other module with respect to the field device to which it interfaces.